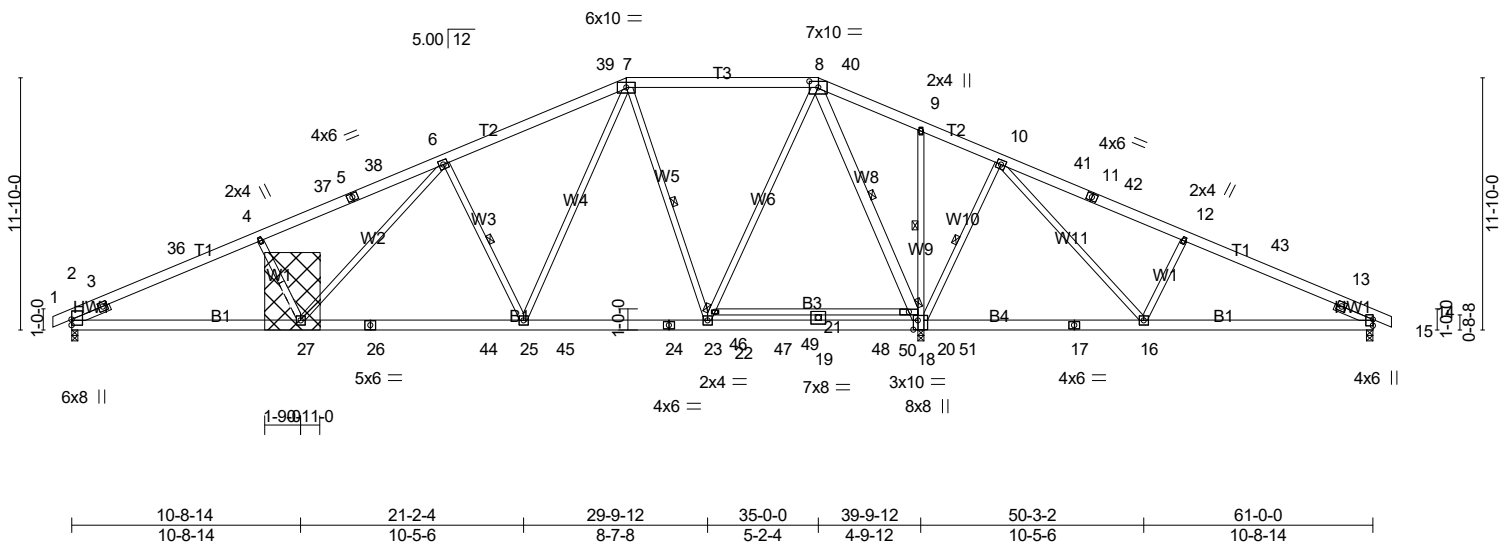
Job	Truss	Truss Type	Qty	Ply	LOT 28 PROVIDENCE CREEK | 29 COTTONSEED LANE FUQUAY-VARINA,
23-7721-R01	R02ARP1	Piggyback Base	6	1	Job Reference (optional)

Atlantic Building Components, Moncks Corner, South Carolina 8.430 s Feb 12 2021 MiTek Industries, Inc. Wed Jan 31 13:34:01 2024 Page 1
ID:av29u_vm2cwLtXF0Wc5ybwyV6X0-2QXDDSnBoyt02pN?hnmX2Qy4zf93HM0kFnliNUzpqra

-0-10-8	8-10-5	17-5-3	26-0-0	35-0-0	39-9-12	43-6-13	52-1-11	61-0-0	61-10-8
0-10-8	8-10-5	8-6-13	8-6-13	9-0-0	4-9-12	3-9-1	8-6-13	8-10-5	0-10-8

Scale = 1:108.0



10-8-14	21-2-4	29-9-12	35-0-0	39-9-12	50-3-2	61-0-0
10-8-14	10-5-6	8-7-8	5-2-4	4-9-12	10-5-6	10-8-14

REPAIR(S) REQUIRED

Plate Offsets (X,Y)-- [8:0-5-0,0-3-7], [18:0-5-4,0-2-8]

LOADING (psf)		**SPACING-**	2-0-0	**CSI.**		**DEFL.**	in	(loc)	l/defl	L/d	**PLATES**	**GRIP**
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.85	Vert(LL)	-0.33	25-27	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.87	Vert(CT)	-0.50	25-27	>957	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.06	18	n/a	n/a		
BCLL	0.0 *	Code IRC2021/TPI2014		Matrix-MSH							Weight: 480 lb	FT = 20%
BCDL	10.0											

LUMBER-

TOP CHORD	2x6 SP No.2
BOT CHORD	2x6 SP No.2 *Except* B3: 2x4 SP No.2, B2: 2x6 SP No.1
WEBS	2x4 SP No.3 *Except* W8: 2x6 SP DSS
SLIDER	Left 2x4 SP No.3 -i 1-11-0, Right 2x4 SP No.3 -i 1-11-0

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 2-7-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing. Except: 6-0-0 oc bracing: 20-22
WEBS	1 Row at midpt 6-25, 7-23, 8-20, 10-18, 9-18

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS. (lb/size) 2=1429/0-3-8 (min. 0-1-14), 14=448/0-3-8 (min. 0-1-8), 18=3298/0-3-8 (min. 0-3-2)
Max Horz 2=-167(LC 15)
Max Uplift2=-212(LC 14), 14=-148(LC 15), 18=-144(LC 11)
Max Grav 2=1593(LC 39), 14=572(LC 55), 18=4541(LC 45)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

TOP CHORD	2-3=-984/0, 3-36=-2959/350, 4-36=-2867/366, 4-37=-2803/367, 5-37=-2723/371, 5-38=-2707/372, 6-38=-2604/388, 6-39=-1877/316, 7-39=-1631/318, 7-8=-774/211, 8-40=0/1545, 9-40=0/1475, 9-10=-21/1508, 10-41=-228/556, 11-41=-252/438, 11-42=-258/426, 12-42=-360/394, 12-43=-404/377, 13-43=-554/330, 13-14=-402/0
BOT CHORD	2-27=-412/2646, 26-27=-227/2039, 26-44=-227/2039, 25-44=-227/2039, 25-45=-1/1105, 24-45=-1/1105, 24-46=-1/1105, 23-46=-1/1105, 23-47=-24/423, 19-47=-24/423, 19-48=-24/423, 18-48=-24/423, 22-49=-326/9, 21-49=-326/9, 21-50=-326/9, 20-50=-326/9, 18-51=-953/153, 17-51=-953/153, 16-17=-953/153, 14-16=-304/457
WEBS	4-27=-418/230, 6-27=-131/726, 6-25=-1190/323, 7-25=-224/1483, 7-23=-1264/251, 22-23=-117/1831, 8-22=-96/2043, 8-20=-2957/200, 18-20=-3174/181, 10-18=-1056/270, 10-16=-162/1061, 12-16=-602/250, 19-21=-323/0, 9-18=-348/96

NOTES-

1) Repair Condition: diagonal web 4-27 has damaged section 2-0-0 long starting 0-0-0 above joint 27.
2) Replace damaged section cut clean with same size and grade of material. Attach 44"H X 31"W X 7/16" OSB (APA Rated Sheathing 24/16 Exposure 1) gusset to both sides of truss at joint 27 with 10d (0.131"x3") nails from each face, driven through both sheets of plywood and clinched. Connected together as follows: 2x6 - 2 rows 1-0-0 o.c., 2x4 - 2 rows 0-6-0 o.c. Minimum 0-3-0 end distance.
3) Repairs specified by this program will be subject to review and change.
4) Unbalanced roof live loads have been considered for this design.
5) Wind: ASCE 7-16; Vult=120mph (3-second gust) Vasd=95mph; TCDL=5.0psf; BCDL=5.0psf; h=35ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -0-10-8 to 5-2-11, Interior(1) 5-2-11 to 17-4-8, Exterior(2R) 17-4-8 to 43-6-6, Interior(1) 43-6-6 to 55-9-5, Exterior(2E) 55-9-5 to 61-10-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.10

Continued on page 2

NOTES-

7) Unbalanced snow loads have been considered for this design.
8) This truss has been designed for greater of min roof live load of 12.0 psf or 2.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
9) WARNING: This long span truss requires extreme care and experience for proper and safe handling and erection. For general handling and erection guidance, see Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses ("BCSI"), jointly produced by SBCA and TPI. The building owner or the owner's authorized agent shall contract with a qualified registered design professional for the design and inspection of the temporary installation restraint/bracing and the permanent individual truss member restraint/bracing. MiTek assumes no responsibility for truss manufacture, handling, erection, or bracing.
10) Provide adequate drainage to prevent water ponding.
11) All plates are 5x5 MT20 unless otherwise indicated.
12) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
13) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 1-0-0 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
14) Bearing at joint(s) 18 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
15) Provide metal plate or equivalent at bearing(s) 18 to support reaction shown.
16) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 212 lb uplift at joint 2, 148 lb uplift at joint 14 and 144 lb uplift at joint 18.

LOAD CASE(S) Standard